WHAT IS CLAIMED IS:

1. An isolated or substantially pure OMP106 polypeptide, which is an outer membrane polypeptide of *Moraxella catarrhalis*, and has a molecular weight of about 180 kD to about 230 kD as determined in SDS polyacrylamide gel electrophoresis using rabbit skeletal muscle myosin and *E. coli* β-galactosidase as the 200 kD and 116.25 kD molecular weight standards, respectively.

2. The OMP106 polypeptide of claim 1, which has a molecular weight of about 190 kD.

3. The OMP106 polypeptide of claim 1, which is an outer membrane polypeptide of *Moraxella catarrhalis* strain selected from the group consisting of ATCC 25238, ATCC 25240, ATCC 43617, ATCC 43618, ATCC 43627, ATCC 43628 and ATCC 49143.

4. The OMP106 polypeptide of claim 3, which *Moraxella catarrhalis* strain is ATCC 49143.

5. The OMP106 polypeptide of claim 3, wherein the *Moraxella catarrhalis* is a hemagglutinating cultivar.

6. The OMP106 polypeptide of claim 1, which reacts with silver stain.

7. The OMP106 polypeptide of claim 1, which specifically binds an antibody that specifically binds the sequence of SEQ ID NO:1 or a fragment thereof.

8. The OMP106 polypeptide of claim 1, which specifically binds an antibody that specifically binds the sequence of SEQ ID NO:2.

9. An isolated or substantially pure OMP106 polypeptide comprising a sequence substantially homologous to the sequence of SEQ ID NO:1.

10. The OMP106 polypeptide of claim 9, which additionally comprises the sequence of SEQ ID NO:2.

11. The OMP106 polypeptide of claim 9, which comprises the sequence of SEQ ID NO:1.

12. The OMP106 polypeptide of claim 11, which additionally comprises the sequence of SEQ ID NO:2.

13. An isolated antibody that specifically binds the OMP106 polypeptide of claim 1 or a fragment thereof.

14. An isolated antibody that specifically binds the OMP106 polypeptide of claim 9 or a fragment thereof.

15. An isolated antibody that specifically binds the OMP106 polypeptide of claim 11 or a fragment thereof.

16. The isolated antibody of claim 13 or 14, which is a cytotoxic antibody that mediates complement killing of *Moraxella catarrhalis*.

17. A peptide fragment of the OMP106 polypeptide of claim 1, which specifically binds to an antibody that specifically binds said OMP106 polypeptide.

18. A peptide fragment of the OMP106 polypeptide of claim 9, which specifically binds to an antibody that specifically binds said OMP106 polypeptide.

19. A vaccine comprising the OMP106 polypeptide of any of claims 1, 2, 5 or 9.

20. A vaccine comprising the peptide fragment of claim 17 or 18.

21. An antigenic composition comprising the OMP106 polypeptide of any of claims 1, 2, 5 or 9.

22. An antigenic composition comprising the peptide fragment of claim 17 or 18.

23. A substantially pure DNA comprising a nucleotide sequence encoding the OMP106 polypeptide of claim 1 or 9.

24. A substantially pure DNA comprising a nucleotide sequence encoding the peptide of SEQ ID NO:1.

25. A substantially pure DNA encoding an OMP106 polypeptide, which comprises a nucleotide sequence that hybridizes under high stringency conditions to the sequence of SEQ ID NO:4 or the complement of sequence of SEQ ID NO:4.

26. The DNA of claim 24, which comprises the sequence of SEQ ID NO:4 or the complement of sequence of SEQ ID NO:4.

27. A method of producing an immune response in an animal comprising immunizing the animal with an effective amount of the OMP106 polypeptide of any of claims 1, 2, 5 or 9.

28. A method of producing an immune response in an animal comprising immunizing the animal with an effective amount of the peptide fragment of claim 17 or 18.

29. A method of producing a non-hemagglutinating cultivar of *M. catarrhalis* from a HA *M. catarrhalis* strain or

cultivar, which comprises serially passaging a HA *M. catarrhalis* strain or cultivar in static liquid cultures.

30. Plasmid pOMP106X obtainable from *E. coli* Top10 (pOMP106X), as deposited with the ATCC and assigned accession number 98579.

31. A substantially pure DNA encoding an OMP106 polypeptide, which comprises a nucleotide sequence that hybridizes to the sequence of SEQ ID NO:9 or the complement of sequence of SEQ ID NO:9.

32. The DNA of claim 31, which comprises the sequence of SEQ ID NO:9 or the complement of sequence of SEQ ID NO:9.

33. An isolated or substantially pure OMP106 polypeptide comprising a sequence substantially homologous to the sequence of SEQ ID NO:10.

34. The OMP106 polypeptide of claim 33, which comprises the sequence of SEQ ID NO:10.

35. An isolated antibody that specifically binds the OMP106 polypeptide of claim 33 or a fragment thereof.

36. A peptide fragment of the OMP106 polypeptide of claim 33, which specifically binds to an antibody that specifically binds said OMP106 polypeptide.

37. A vaccine comprising the OMP106 polypeptide of claim 33.

38. A vaccine comprising the peptide fragment of claim 36.

39. An antigenic composition comprising the peptide fragment of claim 36.

40. A method of producing an immune response in an animal comprising immunizing an animal with an effective amount of the OMP106 polypeptide of claim 33.

41. A method of producing an immune response in an animal comprising immunizing an animal with an effective amount of the peptide fragment of claim 36.